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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/018,644

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Bill Gustafsson

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EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,644

Applicant(s)

GUSTAFSSON ET AL.

Examiner

William H. Mayo III

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in National Application No. PCT/SE00/01334, filed on June 22, 2000.

Information Disclosure Statement

2. The information disclosure statement filed March 5, 2002 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it contains the terms "said", which is improper language for the abstract. The abstract is also replete with misspelled words such as "polymerisation". The applicant should correct all misspelled words. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: The specification is replete with misspelled words such as "polymerisation". The applicant should correct all misspelled words in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to

whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation fraction of copolymer eluted at a temperature higher than 90°C does not exceed 5% by weight, and then claim 2 recites fraction of copolymer eluted at a temperature higher than 90°C does not exceed 7% by weight, which is the narrower statement of the range/limitation.

Treatment of Claims

9. The examiner assumes that the applicant intended to state fraction of copolymer eluted at a temperature higher than 90°C does not exceed 15% by weight.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-2, 5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gross et al (WO Pat Num 97/50093, herein referred to as Gross). Gross discloses a cable comprising an insulating composition (abstract). Specifically, with respect to claim

1, Gross discloses an insulating composition for an electric power cable (abstract) which comprises a cross linkable ethylene polymer (Page 2, 3rd paragraph), wherein the ethylene polymer is a multi-modal ethylene copolymer obtained by coordination catalyzed polymerization of ethylene and at least one other alpha-olefin in at least one stage, said multi-modal ethylene copolymer having a density of 0.890-0.940 g/cm³ (Page 2, lines 3rd paragraph), a MFR of 0.1-10 g/10 min, a MWD of 3.5-8, a melting temperature of at most 125°C, and a comonomer distribution as measured by TREF, such that the fraction of copolymer eluted at a temperature higher than 90°C does not exceed 15% by weight (Page 2, 3rd paragraph), and said multi-modal ethylene copolymer including an ethylene copolymer fraction selected from (a) a low molecular weight ethylene copolymer having a density of 0.900-0.950 g/cm³ and a MFRZ of 25-500 g/10 min, and (b) a high molecular weight ethylene copolymer having a density of 0.870-0.940 g/cm³ and a MFR2 of 0.01-3 g/10 min (Page 3, 3rd paragraph). With respect to claim 2, Gross discloses that the multi-modal ethylene copolymer has a comonomer distribution as measured by TREF such that the fraction of copolymer eluted at a temperature higher than 90°C does not exceed 7% by weight. With respect to claim 5, Gross discloses that the comonomer of the copolymer is at least one member selected from the group consisting of propylene, 1-butene, 4-methyl-1-pentene, 1-hexene, and 1-octene (Page 3, 2nd paragraph). With respect to claim 7, Gross discloses that the multimodal ethylene copolymer is a bimodal ethylene copolymer comprising 30-60 % by weight of a low molecular weight ethylene copolymer fraction and 70-40 % by weight of a high molecular weight ethylene copolymer fraction (Page 4,

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2nd paragraph). With respect to claim 8, Gross discloses that the multimodal ethylene copolymer includes a low molecular weight ethylene copolymer fraction having a density of 0.900-0.950 g/cm³ and a MFR, of 50-100 g/10 min (Page 8, 2nd paragraph). With respect to claim 9, Gross discloses an electric power cable comprising a conductor surrounded by an inner semiconducting layer, an insulating layer, and an outer semiconducting layer (Page 1, 2nd paragraph), wherein the insulating layer comprises an insulating composition for an electric power cable (abstract) which comprises a cross linkable ethylene polymer, wherein the ethylene polymer is a multi-modal ethylene copolymer obtained by coordination catalyzed polymerization of ethylene and at least one other alpha-olefin in at least one stage, said multi-modal ethylene copolymer having a density of 0.890-0.940 g/cm³ (Page 2, lines 3rd paragraph), a MFR of 0.1-10 g/10 min, a MWD of 3.5-8, a melting temperature of at most 125°C, and a comonomer distribution as measured by TREF, such that the fraction of copolymer eluted at a temperature higher than 90°C does not exceed 15% by weight (Page 2, 3rd paragraph), and said multi-modal ethylene copolymer including an ethylene copolymer fraction selected from (a) a low molecular weight ethylene copolymer having a density of 0.900-0.950 g/cm³ and a MFRZ of 25-500 g/10 min, and (b) a high molecular weight ethylene copolymer having a density of 0.870-0.940 g/cm³ and a MFR2 of 0.01-3 g/10 min (Page 3, 3rd paragraph).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 3-4 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross (WO Pat Num 97/50093) in view of Martensson et al (WO 99/35652, herein referred to as Martensson). Gross discloses a cable comprising an insulating composition (abstract) as disclosed above with respect to claim 1.

However, Gross doesn't necessarily disclose the multimodal ethylene copolymer has a viscosity of 4000-7000 Pa.s at 135°C and a shear rate of 10 s⁻¹, 1000-2000 Pa.s at 135°C and a shear rate of 100 s⁻¹, and 300-350 Pa.s at 135°C and a shear rate of 1000 s⁻¹ (claim 3), nor the multimodal ethylene copolymer has a viscosity of 2500-7500

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Pa.s at 135°C and a shear rate of 10 s⁻¹, 1000-2200 Pa.s at 135°C and a shear rate of 100 s⁻¹, and 250-400 Pa.s at 135°C and a shear rate of 1000 s⁻¹ (claim 4), nor the MWD is 4-5 (claim 6).

Martensson teaches an insulating composition for usage with an electrical power cable, wherein the melting temperature to be completely melted in order to avoid “scorch” due to premature decomposition of the cross-linking peroxide (page 4, first paragraph). Specifically, with respect to claim 3, Martensson teaches that the multimodal ethylene copolymer has a viscosity in the range of 2500-7000 Pa.s at 135°C and a shear rate of 10 s⁻¹, 1000-1800 Pa.s at 135°C and a shear rate of 100 s⁻¹, and 250-400 Pa.s at 135°C and a shear rate of 1000 s⁻¹ (Page 4, lines 27-30). With respect to claim 4, Martensson teaches that the multimodal ethylene copolymer has a viscosity in the range of 4000-7000 Pa.s at 135°C and a shear rate of 10 s⁻¹, 1000-2000 Pa.s at 135°C and a shear rate of 100 s⁻¹, and 300-350 Pa.s at 135°C and a shear rate of 1000 s⁻¹ (Page 4, lines 27-30). With respect to claim 6, Martensson teaches that the MWD is 4-5 (Page 4, line 24).

With respect to claims 3-4 and 6, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulating material of Gross to comprise the material configuration as taught by Martensson because Martensson teaches that such a configuration provides melting temperature wherein when completely melted, avoids “scorch” due to premature decomposition of the cross-linking peroxide (page 4, first paragraph) and since it has been held to be within general skill of a worker in the art to select a known material on

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the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Gross et al (Pat Num 5,731,082), Cieloszyk et al (Pat Num 5,837,939), Gross (Pat Num 5,919,565), Keogh (Pat Num 6,203,907), Spendal et al (Pat Num 5,011,891), Gross (EP Pat Num 0735545), Keogh (EP Pat Num 0952172), Jow (Pat Num 0947550), Caronia et al (Pat Num EP 0966003), and Martensson et al (Pat Num 6,369,129), all of which disclose insulating material.

Communication

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



WHM III
March 9, 2003